

HELIX Environmental Planning, Inc.  
7578 El Cajon Boulevard  
Suite 200  
La Mesa, CA 91942  
619.462.1515 tel  
619.462.0552 fax  
www.helixepi.com



May 22, 2013

Dennis Campbell  
Land Use and Environmental Planner  
County of Sand Diego  
Department of Planning and Land Use  
5510 Overland Avenue, Suite 310  
San Diego, CA 92123

Subject: Revegetation Plan for TM 5441

Dear Mr. Campbell:

We understand you have requested an update for the revegetation plan for TM 5441 at Rancho Cielo Estates. HELIX Environmental Planning, Inc. (HELIX) drafted a revegetation plan in 2007, the latest version of which was dated August 15, 2007. At that time project plans included placing fill in the canyon on the west end of TM 5441 and the revegetation plan was written to establish coastal sage scrub on the fill. Since then the project proponent has dropped the placement of fill in this canyon from their project, thereby eliminating the need for a revegetation plan for this TM.

Please contact me at (619) 462-1515 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Sward".

Larry Sward  
Principal Biologist  
County Of San Diego Approved Biology Consultant and Revegetation Planner



RANCHO CIELO ESTATES TM 5441

## REVEGETATION PLAN

~~April 4, 2007~~  
August 15, 2007

*Prepared for :*

LATITUDE 33  
4933 Paramount Drive, 2nd Floor  
San Diego, California 92123

*Prepared by :*

HELIX ENVIRONMENTAL PLANNING, INC.  
7578 El Cajon Boulevard, Suite 200  
La Mesa, California 91941-4646



**RANCHO CIELO SPECIFIC PLAN AMENDMENT; 3813-05-004 (SPA); 3100-5440 (TM); 3600-05-010 (R); 3500-05-043 (STP); 3100-5441 (TM); 3600-05-011 (R); 3500-05-044 (STP); LOG 86-06-026B: ADDENDUM TO THE REVEGETATION PLAN FOR THE RANCHO CIELO SPECIFIC PLAN AMENDMENT AND TENTATIVE MAPS**

The attached report titled “Rancho Cielo Estates Revegetation Plan” prepared by Latitude 33 Planning and Engineering dated August 15, 2007, analyzes the impacts of implementation of Specific Plan Amendment and three associated residential subdivisions in accordance with the California Environmental Quality Act (CEQA). Since the completion of the report, the project description has been revised to: 1) increase the number of dwelling units in TM 5440 from 9 to 11; 2) increase the number of dwelling units in TM 5441 from 29 to 31; and 3) delete TM 5442, a three-lot subdivision. The analysis of the property assumed greater site disturbance, than that of the proposed project. The grading limits were maintained in TM 5440 and 5441 even though there is a net increase of four dwelling units between the two lots. Therefore, the reduction of the three-lots does not affect the findings, conclusions, or recommended mitigation measures contained in the report. Accordingly, the report provides an adequate analysis pursuant to CEQA and the County of San Diego Guidelines for Determining Significance.

**AMENDED PROJECT DESCRIPTION**

The proposed project represents the seventh amendment to the Rancho Cielo Specific Plan in response to the reclassification of three parcels, the deletion of a water reclamation facility and reclaimed water reservoirs and changing the implementation of the Village Estates areas.

**Changing the Classifications of Three Parcels**

The first reclassification involves the water reclamation facility site that is currently classified as WR in the Specific Plan. The new classification will be CE, Country Estates. The water reservoir site will also be reclassified as CR, Community Recreation. The third reclassification involves changing the VC or Village Center site to VE, Village Estate.

**TM 5440**

The Village Center site would be reclassified to Village Estate, reflecting a change in the proposed use. The area would be subdivided into one parcel for 11 condominium units. The southern portion of this parcel includes an existing open space easement that would not be affected by the proposed reclassification. The area between the northern edge of the existing open space and southern edge of the development or Zone B brush management area, which ever extends further south, will be dedicated as open space.

### **TM 5441**

The Village Estate site (“H”) would be subdivided into one parcel for 31 condominium purposes. The thirty-one condominium units will be constructed over the eastern portion of the site. The existing open space easement will be slightly altered.

### **Water Reclamation Facility Site**

TM 5442 has been withdrawn and this parcel is not being proposed for subdivision.

### **Changing the Implementation of the Village Estates Areas**

The major use permit requirements within the Village Estates areas will be deleted. A major use permit was previously required by a “P” Special Area Regulation, which is a part of the zoning of RV-3, Variable Family Residential Use Regulation. The “P” Special Area Regulation symbolizes a planned development. The applicant is no longer proposing a planned development.

A “D” Special Area Designator will be added to the zoning of both Village Estate sites. Changing the “P” Special Area Regulation to a “D” Special Area Regulation will require approvals of two Rezones. The “D” Special Area Designator will require approvals of two site plans to verify conformance with the design of the other development within the Rancho Cielo Project.



Rancho Cielo Estates TM 5441  
Revegetation Plan

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
I.	PURPOSE AND GOALS OF THE REVEGETATION PLAN .....	1
II.	PROJECT SUMMARY .....	1
	A. Project Site Location .....	1
	B. Existing Site Conditions .....	1
	C. Project Impacts and Mitigation.....	1
III.	AGENCY CONCERNS AND REQUIREMENTS.....	2
IV.	REVEGETATION DESIGN CONCEPT .....	2
V.	PROJECT RESPONSIBILITY .....	2
	A. Project Proponent.....	2
	B. Revegetation Specialist .....	2
	C. Installation and Maintenance Contractor(s) .....	2
VI.	ESTABLISHMENT OF A REFERENCE SITE.....	3
VII.	REVEGETATION SITE SUITABILITY ANALYSIS.....	3
VIII.	REVEGETATION IMPLEMENTATION .....	4
	A. Flagging/Fencing .....	4
	B. Access/Staging Areas .....	4
	C. Site Preparation .....	4
	D. Installation .....	4
	E. Irrigation.....	5
	F. Construction Limitations .....	5
	G. Schedule .....	6
IX.	PROJECT MAINTENANCE .....	6
	A. General Maintenance .....	6
	B. Fencing .....	6
	C. Staging Area.....	6
	D. Weed Control.....	7
	E. Re-seeding .....	7
	F. Pruning .....	7
	G. Trash Removal.....	7
	H. Pest Control .....	7
	I. Fertilization .....	7

## TABLE OF CONTENTS (cont.)

<u>Section</u>	<u>Title</u>	<u>Page</u>
X.	PROJECT MONITORING.....	7
	A. Installation Monitoring.....	7
	B. Maintenance Monitoring .....	8
	C. Annual Monitoring.....	8
	1. Monitoring.....	8
	2. Photo Documentation.....	8
	3. Reports.....	9
XI.	SUCCESS CRITERIA .....	9
	A. Specific Success Criteria.....	9
	1. Species Richness.....	9
	2. Vegetative Cover .....	10
	B. Completion of Mitigation .....	10
	1. Notification of Completion .....	10
	2. Agency Confirmation.....	10
	C. Contingency Measures .....	10
	1. Initiating Procedures .....	10
	2. Alternative Locations for Contingency Mitigation .....	10
	3. Funding Mechanism/Bonding .....	10
XII.	PROJECT COST ESTIMATE.....	11
XIII.	REFERENCES.....	12

## LIST OF FIGURES

<u>Number</u>	<u>Title</u>	<u>Follows Page</u>
1	Regional Location Map .....	2
2	Project Location Map.....	2
3	Restoration Area.....	2

## LIST OF TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Upland Revegetation Seed Mixture .....	5
2	Monitoring Schedule.....	8
3	Revegetation Success Criteria .....	9



## I. PURPOSE AND GOALS OF THE REVEGETATION PLAN

This report presents the revegetation plan for Assessor's Parcel Number (APN) 264-321-32 within the Rancho Cielo Estates Specific Plan (Specific Plan Amendment [SPA] area 05-004). This revegetation is based on the proposed SPA (Latitude 33 Planning and Engineering 2005), which reclassifies the use of Parcel 5 of Tentative Map (TM) 5441 from a reclaimed water reservoir to a fill site. Following installation of the fill, the parcel would be restored with coastal sage scrub and chaparral vegetation and designated as biological open space.

The goal of this revegetation plan is to establish enough native upland vegetation on the surface of the fill site to deter invasive species establishment on site and in adjacent undisturbed open space.

## II. PROJECT SUMMARY

### A. PROJECT SITE LOCATION

The project site is located approximately 2 miles west of Lake Hodges dam and 2 miles east of Encinitas (Figure 1) within the Rancho Cielo Estates SPA in the San Dieguito Planning Area portion of unincorporated San Diego County. The parcel that will be filled/revegetated occurs within Section 12 in Township 13 South, Range 3 West of the U.S. Geological Survey Escondido 7.5-minute quadrangle (Figure 2) on page 1149, coordinates A4 in the 2006 Thomas Brothers Guide street map.

### B. EXISTING SITE CONDITIONS

Parcel 5 is undeveloped and consists of a canyon and adjacent slopes. Elevations within the parcel range from approximately 900 feet above mean sea level (amsl) in the canyon at the northern boundary to 1,040 feet amsl on a hill at the eastern boundary.

Soils are San Miguel-Exchequer rocky silt loam (9 to 70 percent slopes), which occurs on mountainous uplands and is comprised of approximately 50 percent San Miguel loam, 40 percent Exchequer silt loam, and 10 percent rock outcrops (Bowman 1973).

Vegetation on site consists of undisturbed southern mixed chaparral and patches of Diegan coastal sage scrub (Figure 3). Due to the undisturbed nature of the site and continuity with surrounding open space, the site likely provides habitat for numerous species of wildlife.

### C. PROJECT IMPACTS AND MITIGATION

Implementation of the fill proposed for this parcel would impact approximately 6.57 acres of southern mixed chaparral and 0.49 acre of Diegan coastal sage scrub (Figure 3). A total of eight individuals of Palmer's sagewort (*Artemisia palmeri*), a sensitive species (California Native Plant Society List 4.2, County Group D), were observed within the proposed impact area. The bottom of the canyon contains a narrow unvegetated drainage that provides limited habitat value for wildlife since it is not a wetland. Because the on-site portion of the drainage occurs near the top of the canyon, the functions (i.e., groundwater recharge, sediment stabilization, and nutrient removal/transformation) are limited.

Since the entire parcel was previously approved for development, no mitigation is required for the impacts associated with the placement of fill; however, because the site is surrounded by native vegetation, it should be revegetated with enough native cover to control erosion, enhance wildlife value, and prevent the establishment of non-native species. The revegetation and open space dedication of this parcel will enhance the connectivity of the open space parcel located southeast of the fill site with additional open space to the northwest.

### **III. AGENCY CONCERNS AND REQUIREMENTS**

This revegetation plan is provided in response to a request by the County of San Diego (County) in a letter dated January 31, 2007.

### **IV. REVEGETATION DESIGN CONCEPT**

On-site habitat revegetation is intended to establish native cover from the plant species that occur on undisturbed slopes adjacent to the revegetation site and plants that occurred within the revegetation area itself prior to impacts. The final composition of plant species within the revegetation area may vary somewhat from that present in existing, mature habitat based on the ability of individual species to establish in the fill soils and the relatively short timeframe available for establishment.

### **V. PROJECT RESPONSIBILITY**

#### **A. PROJECT PROPONENT**

The project developer will be responsible for financing the installation and five-year maintenance and monitoring of the habitat revegetation proposed in this plan.

#### **B. REVEGETATION SPECIALIST**

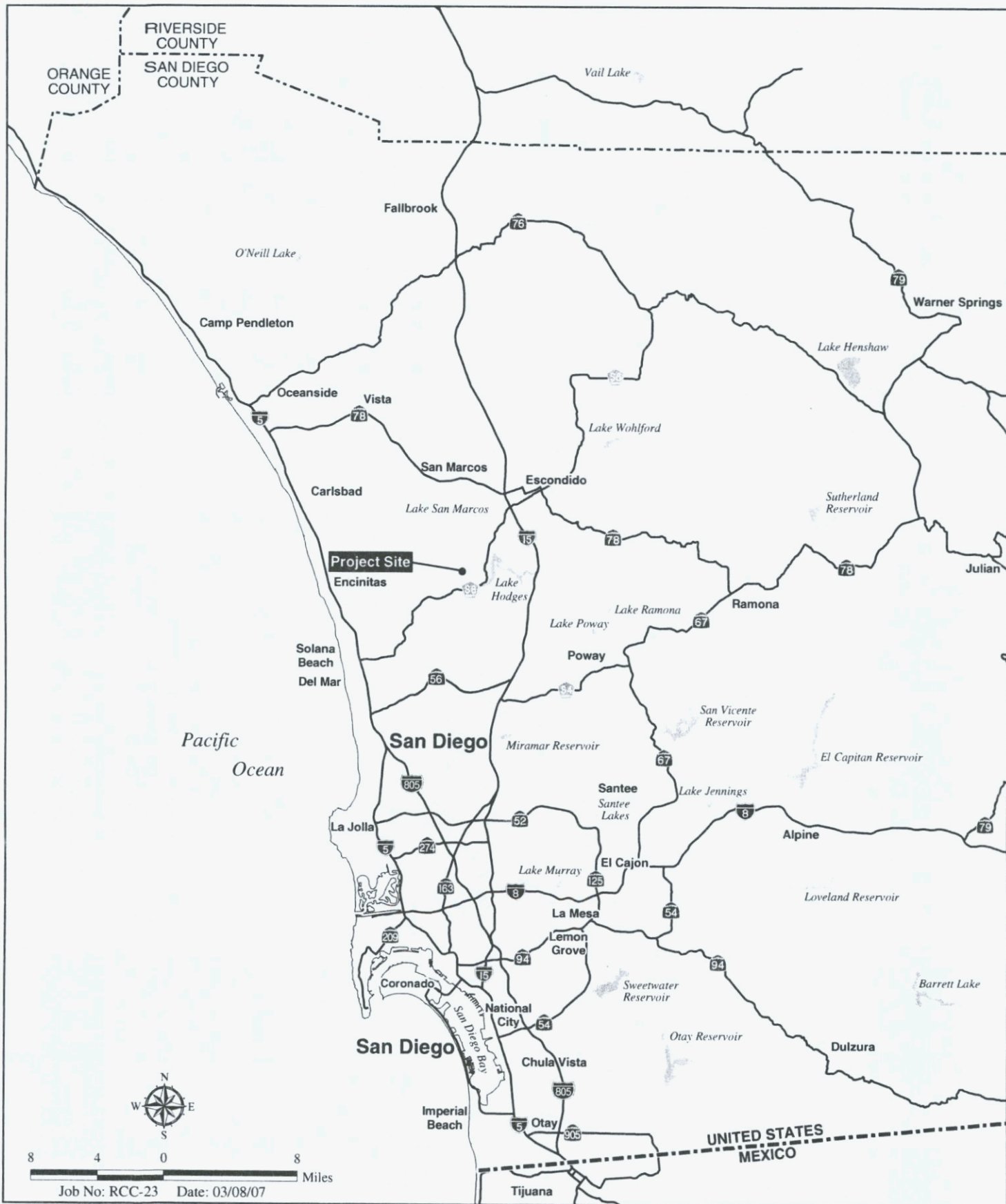
Overall supervision of the installation, maintenance, and monitoring of this revegetation project will be the responsibility of the revegetation specialist. This person has the authority to substitute and change this plan as conditions of the site dictate, as long as the County is notified. The revegetation specialist will educate all participants with regard to revegetation goals and requirements and directly oversee the fill/grading operations and installation of plant materials. It is noted that if protocol surveys for sensitive bird species are required prior to fill or grading, a biologist with the appropriate endangered species permits will be required. The revegetation specialist will provide guidance to the project proponent and contractor(s) during the five-year maintenance phase.

#### **C. INSTALLATION AND MAINTENANCE CONTRACTOR(S)**

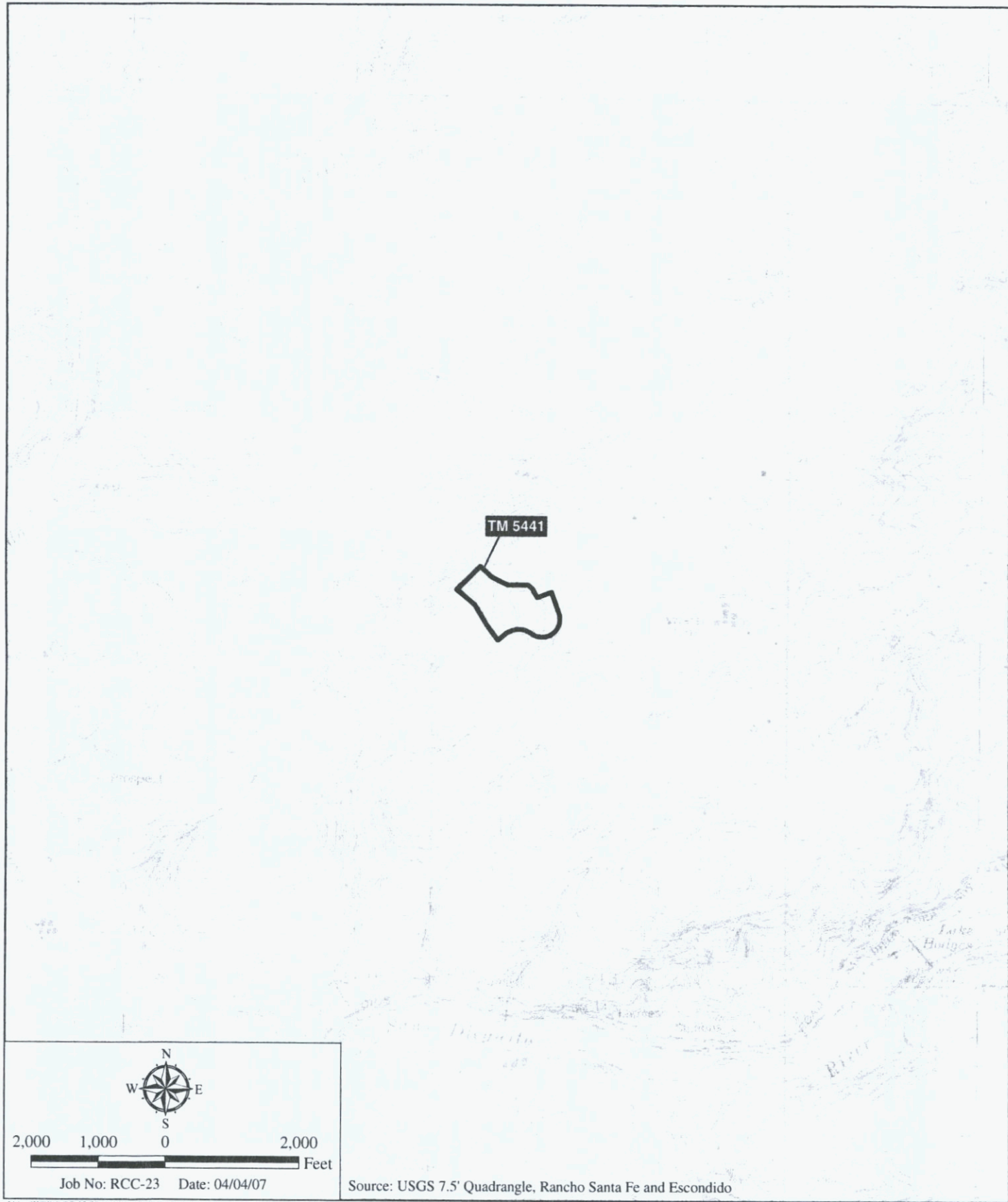
Revegetation installation and maintenance will be conducted by a licensed landscape contractor(s; hereafter contractor) with experience in upland restoration. Different contractors may be used for the installation and maintenance phases of the revegetation effort, and the project proponent may change contractors at its discretion.

**HELIX**





**Regional Location Map**  
 RANCHO CIELO ESTATES TM 5441  
 RESTORATION PLAN  
 Figure 1



**Project Location Map**  
RANCHO CIELO ESTATES TM 5441  
RESTORATION PLAN  
Figure 2





**Restoration Area**  
 RANCHO CIELO ESTATES TM 5441  
 RESTORATION PLAN  
 Figure 3



Project installation ~~may will~~ include topsoil salvage and grading, and will include seeding and removal of non-native species. Maintenance following installation will occur for a five-year period. Maintenance activities include but are not limited to regular weeding of the revegetation area, meetings with the restoration specialist, and conducting any necessary remedial measures in a timely manner. The contractor will work closely with the restoration specialist to ensure proper installation and maintenance of native habitat. The contractor is responsible for obtaining authorization for change orders, if needed, from the project proponent.

## VI. ESTABLISHMENT OF A REFERENCE SITE

In order to have a benchmark to measure the success of this revegetation effort, the pre-impact conditions of the proposed revegetation area will be documented. Based on a biological assessment conducted in December 2005, and a follow-up site visit conducted in February 2007, this area was visually estimated to contain 95 percent cover consisting of seventeen native species. Cover was dominated by mature shrubs (90 percent), consisting mostly of wart-stemmed ceanothus (*Ceanothus verrucosus*) on the southwest-facing slope and Ramona ceanothus (*Ceanothus tomentosus*) on the northeast-facing slope. Herbaceous native species comprised approximately 10 percent of the cover, and no tree layer cover was observed. The site contains mature vegetation that has not burned since 1991. Because chaparral vegetation often takes years to establish, the revegetation effort cannot be expected to attain the same amount of cover or plant maturity at the end of five years. In addition, the revegetation area is expected to be dominated by coastal sage scrub plants, which often precede chaparral vegetation on disturbed sites. Over time, the revegetation area is expected to blend into adjacent habitat, although the exposure of the revegetated area will be different from the existing topography and that, with the change in soil, may result in the establishment of a different plant species composition. Non-native cover in the reference area is low (estimated at less than 10 percent) and consists mostly of naturalized non-native grasses.

## VII. REVEGETATION SITE SUITABILITY ANALYSIS

Unless specific measures are taken, the fill soils on which revegetation will occur will be substantially different in texture, nutrient levels, and/or biotic composition from soils currently present on site. To improve the site's suitability for revegetation, topsoil and subsoil salvage would occur prior to importing fill material into the site. Salvaged subsoil and topsoil would be replaced over fill prior to seeding.

### EXISTING FUNCTION AND VALUE OF THE REVEGETATION AREA

As described in Section II.B, the revegetation area contains dense undisturbed habitat that functions as habitat for numerous wildlife species. The parcel is too small to serve substantial functions and/or have significant value on its own; however, it is contiguous with surrounding native vegetation and, as such, has substantial value for wildlife, watersheds, erosion control, etc. The change in use of this parcel from a water reservoir to open space will improve connectivity between open space located southeast of the revegetation site with additional open space to the northwest.



## VIII. REVEGETATION IMPLEMENTATION

### A. FLAGGING/FENCING

To minimize potential for impacts to native habitats adjacent to the revegetation area, flagging and/or temporary fencing will be installed around the mitigation area prior to brushing or grading activities. In addition, temporary silt fencing will be installed along the downstream edge of the area to be graded. The revegetation specialist will be present on site to direct brushing, fill, and grading activities when they occur adjacent to sensitive habitat.

### B. ACCESS/STAGING AREAS

~~Access to the fill site has not been determined. The a~~Access to the site shall occur from the north end of the site, along a previous dirt road (Figure 3). The access route will be flagged or otherwise delineated to avoid unauthorized impacts. ~~Portions of the access road within project open space will be revegetated, which will consist of salvaging 6 inches of topsoil prior to use as a road. Following fill installation completion, the entire access road will be decompacted, topsoil returned, and native seed will be applied (the same mix specified for the revegetation area). This area will be maintained along with the rest of the revegetation area for five years. Staging areas will be located entirely within the boundaries of nearby developed lots.~~

### C. SITE PREPARATION

Revegetation site preparation will consist of topsoil salvage, fill, topping with salvaged soil, and creating final grade. Equipment anticipated may include but will not be limited to a bulldozer, track loader, excavator, and skip loader.

The soil cap over the fill will be at least 4 feet deep, the bottom two of which will consist of crushed rock equal to or smaller than 1 inch. The middle soil layer (between 6 inches and 2 feet deep) will consist of salvaged native subsoil of a similar depth at the fill site. The top 6 inches will consist of topsoil salvaged from the top 4 to 6 inches of the fill site plus the mulched native vegetation currently growing. The existing vegetation at the fill site will be collected, crushed, and mulched to less than 2 inches and will then be incorporated into the salvaged topsoil. It is important that these salvaged layers be collected, stockpiled, and applied separately. All soils will be collected and applied under the supervision of the restoration specialist.

Due to the slope of the existing canyon walls compared to the relatively flat surface of the revegetation area, salvaged soil material may result in more soil than is necessary to meet specifications in this report. This is because the actual surface of the revegetation area is smaller than the surface of the soil salvage area. If that proves to be true, these layers should be as deep as the available salvaged soils dictate, provided they meet any geotechnical specification.

### D. INSTALLATION

Native seed from on-site or nearby sources (within one mile of the revegetation site, if available) will be used, as shown in Table 1. Since seed availability can vary greatly, the final seed mix must be inspected and approved by the revegetation specialist prior to installation. The County will also be notified of any changes prior to installation.

## HELIX

**Table 1**  
**UPLAND REVEGETATION SEED MIXTURE**

Scientific Name	Common Name	Percentage			Pounds Per Acre
		Purity	Germination	Live Seed	
<i>Adenostoma fasciculata</i>	chamise	90	20	20	2
<i>Artemisia californica</i>	California sagebrush	15	60	10	3
<i>Artemisia palmeri</i>	Palmer's sagewort	20	50	10	1
<i>Baccharis sarothroides</i>	broom baccharis	5	40	3	1
<i>Calystegia macrostegia</i>	California morning glory	90	80	75	0.5
<i>Ceanothus tomentosus</i>	Ramona lilac	98	70	75	2*
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	98	70	75	2*
<i>Deinandra fasciculatum</i>	fascicled tarplant	20	80	20	1
<i>Eriogonum fasciculatum</i>	California buckwheat	50	20	10	4
<i>Hazardia squarrosa</i>	sawtooth goldenbush	15	20	3	3
<i>Heteromeles arbutifolia</i>	toyon	95	50	50	1*
<i>Lotus scoparius</i>	deerweed	95	80	85	1
<i>Lupinus bicolor</i>	lupine	98	85	90	1
<i>Mimulus aurantiacus</i>	monkeyflower	2	60	2	2
<i>Nassella pulchra</i>	purple needlegrass	90	80	75	2
<i>Rhus integrifolia</i>	lemonadeberry	90	70	75	1*
<i>Salvia mellifera</i>	black sage	70	50	40	2
<i>Yucca whipplei</i>	our Lord's candle	90	65	60	1
<b>TOTAL</b>					<b>30.5</b>

\*Seed should be scarified using an appropriate method for this species

Seeding will occur as hydroseeding or hand seeding followed by raking. Since topsoil from existing habitat will be used at the site, no additional soil amendments should be required. A few of the chaparral species may require seed scarification by the seed supplier, as specified below.

#### E. IRRIGATION

To minimize runoff and potential for encroachment of non-native species into surrounding native habitat, irrigation will not be installed in this revegetation area.

#### F. CONSTRUCTION LIMITATIONS

Brushing, fill, and grading activities will occur when the soil is dry to minimize damage to soil microbes, generally in late summer and fall. Construction would avoid the breeding season for avian species (February 1 to August 31) that could potentially occupy habitat within or adjacent to the revegetation area.

## HELIX



## G. SCHEDULE

Implementation of this revegetation plan is expected to occur in August 2007. Once the project tentative map is approved, it will condition the project to submit final revegetation plans for review and approval. Following revegetation plan approval, the project applicant will have up to two years to install the required improvements. Seed collection will be started in 2007 in anticipation of approval and commencement of grading. Initial revegetation plan implementation activities will include marking the boundaries of the impact/revegetation area, installing silt fencing, brushing, subsoil and topsoil salvage, fill, and establishing final grade. Monitoring of the revegetation effort will begin with installation and continue for five years following completion of installation.

## IX. PROJECT MAINTENANCE

A five-year maintenance program is proposed to ensure the successful establishment and persistence of vegetation in the revegetation site. Maintenance activities will be directed by the revegetation specialist.

The following maintenance requirements will be met for the entire five-year maintenance period:

### A. GENERAL MAINTENANCE

Damage to the revegetation area occurring as a result of unusual weather, vandalism, or other events outside the control of maintenance personnel and revegetation specialist will be repaired as directed by the revegetation specialist. The project proponent will pay for the cost of such repairs as extra work. At his expense, the contractor will repair any damage caused by contractor's inadequate maintenance, as determined by the revegetation specialist. It is the contractor's responsibility to keep all planted areas free of debris, weeds, erosion, and monitor vegetation condition and health.

These maintenance guidelines are specifically tailored for native plant establishment. Maintenance personnel will be fully informed of the habitat creation/enhancement program so that they understand the goals of the effort and the maintenance requirements. A professional with experience and knowledge in native habitat creation/enhancement maintenance will supervise all maintenance.

The maintenance contractor will service the entire revegetation area at least once a month for the duration of the revegetation effort. The contractor will meet the revegetation specialist at the site when requested and will perform all checklist items in a timely manner as directed by the project proponent.

### B. FENCING

The maintenance contractor will be responsible for repairing damage to protective fencing around the revegetation areas within one working day of such damage.

### C. STAGING AREA

Only construction equipment necessary to accomplish the landscape installation will be allowed in the revegetation areas. Workers' vehicles will be parked outside the revegetation areas, and all equipment will be removed from the site as soon as its task is completed. No vehicular fluids will be added or changed within the revegetation areas.

## HELIX

#### D. WEED CONTROL

Non-native species eradication will be conducted as necessary to minimize competition that could prevent the establishment of native species. As non-native plants become evident, they should be removed by hand or carefully controlled with the appropriate herbicides.

#### E. RE-SEEDING

Re-seeding of native species will be required if vegetation establishment from the initial seeding is low, as determined by the revegetation specialist. The contractor will conduct re-seeding should it be recommended and authorized by the project proponent.

#### F. PRUNING

No post-installation pruning is necessary unless otherwise directed by the revegetation specialist.

#### G. TRASH REMOVAL

All planted and seeded areas will be kept free of trash and debris and will be checked monthly for five years.

#### H. PEST CONTROL

The restoration specialist will monitor insects, vertebrate pests, and diseases within the revegetation site. A high threshold of tolerance for pests will be permitted before control measures are considered. As required by law, only a licensed pest control adviser will conduct any pest control. All applicable federal and state laws and regulations will be closely followed.

#### I. FERTILIZATION

Fertilizer will not be applied within any revegetation areas except in extraordinary circumstances and only at the written direction of the revegetation specialist.

### X. PROJECT MONITORING

#### A. INSTALLATION MONITORING

The revegetation specialist will monitor habitat revegetation installation activities including brushing, subsoil and topsoil salvage, final grading, subsoil and topsoil placement, and seeding. Installation monitoring will include attendance at one pre-construction meeting and daily monitoring of the revegetation site during the salvage and installation tasks. Specifically, the revegetation specialist will:

- Ensure that installation personnel understand the project requirements and limitations;
- Ensure that subsoil and topsoil salvage and application is properly conducted;
- Inspect seed material prior to installation;
- Monitor the manner in which seed is installed; and

#### HELIX



- ☐ ~~Prepare a letter for submittal to the County stating that the installation is complete and the five-year maintenance and monitoring period has begun. Arrange a site visit with County staff to confirm installation as per the approved plan. Once confirmed, the official 5-year maintenance and monitoring period shall begin; and~~
- Document the start of the 5-year maintenance and monitoring period in a letter to the County.

## B. MAINTENANCE MONITORING

Following installation, the revegetation specialist will monitor the contractor's maintenance activities for five years (Table 2). Monitoring visits will be conducted eight times during Years 1 and 2, with an emphasis on monitoring during the growing season for upland vegetation (November through May) and one additional inspection in August. In Years 3, 4, and 5, provided vegetation is more established, only four site visits will be conducted per year, again mostly within the growing season. During each visit, the revegetation specialist will inspect the site to ensure that the revegetation effort is progressing as planned and to identify any problems that may affect the project's success. If necessary, a list of remedial measures will be provided to the project proponent and contractor following each inspection.

Table 2 MONITORING SCHEDULE	
PHASE	SCHEDULE
Installation	Daily
<b>Post Installation</b>	
Years 1 and 2	
November to May	Monthly
August	Once
Years 3 through 5	February, April, August, and December

## C. ANNUAL MONITORING

In addition to maintenance monitoring visits, the revegetation specialist will conduct success evaluations for five years. Annual assessments will consist of qualitative (visual) assessments and site photos.

### 1. Monitoring

The annual assessment will be conducted each year in May to coincide with the typical peak of the growing season for upland vegetation. Annual monitoring will consist of a qualitative (visual) assessment of native and non-native vegetative cover, species richness (i.e., number of species), species composition (i.e., types of species), and native plant recruitment within the site.

### 2. Photo Documentation

Several permanent photo documentation stations will be established. Photos will be taken each year and will be included in the annual reports.

## HELIX

### 3. Reports

Reports will be prepared each year during the five-year monitoring period. During Years 1, 2 and 3, monitoring memos and one annual monitoring report will be submitted to the County. At the end of Years 4 and 5, one annual report will be submitted to the County.

The annual reports will be based on qualitative data collected during the annual assessment as appropriate and will focus on what (if any) adjustments are necessary to ensure ultimate success of the revegetation project. Each report will evaluate the success of the revegetation effort to date, along with any recommendations for remedial measures that may be deemed necessary.

## XI. SUCCESS CRITERIA

The following sections provide standards to determine the successful completion of the revegetation plan. Attainment of these standards indicates the revegetation area is progressing toward and has the habitat functions and services specified by this plan. These success criteria apply to Years 3 through 5 of the monitoring period. Methods to be used to measure these success criteria are described in the following section.

### A. SPECIFIC SUCCESS CRITERIA

#### 1. Species Richness

Species richness is the number of native species present in a given area. Since not all species that occur at the site prior to impacts are expected to occur after revegetation, the annual success criterion for species richness is 8, 10, and 12 native species, respectively, for Years 3, 4, and 5 (Table 3). No specific richness criteria have been established for Years 1 or 2. If the species richness goal for a given year is not met, corrective measures (e.g., reseeding) will be taken to ensure eventual achievement of long-term goals.

Table 3 REVEGETATION SUCCESS CRITERIA			
Year	SPECIES RICHNESS	VEGETATIVE COVER (percent)	
		Native Species	Non-native Species
1	8	25	10
2	8	40	10
3	8	50	10
4	10	60	10
5	12	70	10



## 2. Vegetative Cover

In addition to species richness, native and non-native plant species cover will be used to determine project success. Annual performance goals have been set to track the progress of the revegetation effort. Since the site will be established solely from seed, native species cover is expected to increase slowly over the five-year maintenance and monitoring period (Table 3). With native cover of 70 percent, the site is expected to continue to develop over time and reach the 95 percent cover that is present in mature habitat. If annual goals for total cover are not met, additional measures (e.g., re-seeding) will be taken as necessary to ensure final success. Non-native species cover would not exceed 10 percent absolute cover in Years 3, 4, and 5.

## B. COMPLETION OF MITIGATION

### 1. Notification of Completion

The project proponent shall notify the County of completion of the revegetation effort through the submittal of the Year 5 Annual Report.

### 2. Agency Confirmation

If the habitat revegetation meets the success standards identified in this plan at the end of the five-year monitoring period, the revegetation will be considered a success and maintenance and monitoring will end. If success standards are not met, the maintenance and monitoring program may be extended one year at a time until the standards are met. Specific remedial measures (approved by the County) will be used during any extension. Alternatively, a subsequent agreement may be negotiated with the County. Only areas that fail to meet success standards will be subject to any subsequent agreement. Should the revegetation effort meet all goals prior to the end of the five-year monitoring period, the County may, at their discretion, terminate the monitoring effort.

## C. CONTINGENCY MEASURES

### 1. Initiating Procedures

Upon receipt of any of the annual reports, if the County determines that the revegetation effort is not on course to meet final success criteria for the project, the project proponent shall be notified in writing that the mitigation effort is in need of remedial measures. The project proponent shall have 30 days to confirm or challenge the determination. Potential remediation measures include such items as extending the monitoring period and reseedling.

### 2. Alternative Locations for Contingency Mitigation

Revegetation is to occur on site in the area impacted by fill. No alternate location is proposed at this time.

### 3. Funding Mechanism/Bonding

The project proponent will be responsible for all costs associated with this project, with the exception of contractor negligence. The project proponent will post a bond for the cost of construction and

**HELIX**

maintenance and monitoring outlined in this revegetation plan. The bond will cover the cost of this revegetation plan plus an additional contingency cost. The County will release the bond upon final acceptance of the revegetation site a successful.

## XII. PROJECT COST ESTIMATE

Installation and materials for revegetation are expected to cost approximately \$35840,240000, itemized as follows:

<u>Project Initialization</u>	<u>\$3,930<sup>1</sup></u>
<u>Construction Fencing</u>	<u>\$8,530<sup>1</sup></u>
<u>Erosion Control</u>	<u>\$10,430<sup>1</sup></u>
<u>Seed &amp; Seed Installation</u>	<u>\$59,300<sup>1</sup></u>
<u>5 Years of Maintenance</u>	<u>\$217,650</u>
<u>5 Years of Monitoring</u>	<u>\$36,400</u>
<u>5 Annual Reports</u>	<u>\$22,000</u>

TOTAL \$358,240

This estimate includes a 3% annual increase for maintenance, monitoring, and report writing costs; it does not include which includes brushing, topsoil salvage, or final grading, seeding, and five years of maintenance, biological monitoring, and reports., which would be conducted by the project grading contractor.

---

<sup>1</sup> Includes 20 percent contingency.



### XIII. REFERENCES

- Bowman, R. 1973. Soil Survey of the San Diego Area. USDA in cooperation with the USDI, UC Agricultural Experiment Station, Bureau of Indian Affairs, Department of the Navy, and the U.S. Marine Corps.
- Latitude 33 Planning and Engineering. 2005. Specific Plan Amendment for Rancho Cielo SPA 05-[004]. Prepared for Rancho Cielo Estates. June.
- Sawyer, J.O. and T. Keeler-Wolf. 1995. A Manual of California Vegetation. CNPS. 472 pp.
- The Thomas Guide. 2006. San Diego and Orange Counties.